

CLAIMS

What is claimed is:

1. A method comprising:
receiving in a virtual machine contents of a program for creating a virtual environment for interacting with a host platform in a computing device; and
determining by the virtual machine if the received contents comprises predetermined instructions for performing at least one unauthorized task.
2. The method of claim 1, wherein the determining if the received contents comprises predetermined instructions further comprises:
comparing the received contents of the program to at least one predetermined instruction patterns corresponding to the predetermined instructions for performing the at least one unauthorized task; and
purging the predetermined instructions from the received contents based on the comparing.
3. The method of claim 2, wherein the comparing the contents of the received program to at least one predetermined instruction patterns further comprises:
searching predetermined locations of the received contents of the program for the predetermined instructions.
4. The method of claim 2, wherein the virtual machine comprises a translation cache, wherein the contents of the program reside in the translation cache, and wherein determining if the received contents comprises predetermined instructions further comprises:
checking a branch target at the outlets of the translation cache; and
determining if the checked branch target comprises at least one of a translation cache and the execution engine.

5. The method of claim 4, further comprising:
generating checking and determining instructions for performing the checking the branch target and determining if the checked branch target comprises at least one of a translation cache and the execution engine.
6. The method of claim 2, wherein the virtual machine comprises an execution engine and at least one interpret function invoked by the execution engine, wherein the contents of the program reside in the at least one interpret function.
7. A system comprising:
a virtual machine to receive contents of a program for creating a virtual environment for interacting with a host platform in a computing device, the virtual machine comprising a detector subsystem to determine if the received contents comprises predetermined instructions for performing at least one unauthorized task.
8. The system of claim 7, wherein the detector subsystem is to purge the predetermined instructions from the received contents of the program, wherein the detector subsystem further comprises:
a comparator logic to compare the received contents of the program to at least one predetermined instruction patterns corresponding to the predetermined instructions for performing the at least one unauthorized task;
and
a search logic to search predetermined locations of the received contents of the program for the predetermined instructions.
9. The system of claim 7, wherein the virtual machine comprises:
at least one of a translation cache to store translation data;

a translation engine to invoke the detector subsystem to determine if the contents of a translation data storage comprises predetermined instructions for performing at least one unauthorized task;
at least one loader, to receive contents of a program and to invoke the detector subsystem;
at least one interpreter function; and
an execution engine to invoke the detector subsystem to determine if the contents of the at least one interpret function invoked by the execution engine comprises predetermined instructions for performing at least one unauthorized task.

10. The system of claim 9, wherein the detector subsystem further comprises:

translation cache logic to check a branch target at the outlets of the translation cache and to determine if the checked branch target comprises at least one of a translation cache and the execution engine, based on translation cache logic instructions; and

an instruction generation subsystem to generate the translation cache logic instructions.

11. The method of claim 8, wherein the at least one predetermined instruction patterns are stored in a database in communication with the virtual machine.

12. A storage medium that provides software that, if executed by a computing device, will cause the computing device to perform the following operations:

receiving in a virtual machine contents of a program for creating a virtual environment for interacting with a host platform in a computing device; and

determining by the virtual machine if the received contents comprises predetermined instructions for performing at least one unauthorized task.

13. The storage medium of claim 12 further comprising software to:
compare the received contents of the program to at least one predetermined instruction patterns corresponding to the predetermined instructions for performing the at least one unauthorized task; and
purge the predetermined instructions from the received contents based on the comparing.
14. The storage medium of claim 13 further comprising software to:
search predetermined locations of the received contents of the program for the predetermined instructions
15. A method comprising:
receiving a system call for a host platform in communication with a virtual machine of a computing device; and
determining by the virtual machine if the received system call comprises at least one predetermined system call for performing at least one unauthorized task.
16. The method of claim 15, wherein the determining if the received system call comprises predetermined system call further comprises:
comparing the system call to at least one predetermined system call patterns corresponding to the predetermined system calls for performing the at least one unauthorized task.
17. The method of claim 16, wherein the unauthorized task comprises:
a task predetermined to be an inhibitive task by the computing device; and
a task to output data into memory regions storing at least one of instructions and data for operations of the virtual machine.

18. A method comprising:
receiving a virtualized memory address for a host platform in communication with a virtual machine of a computing device; and
determining by the virtual machine if the received virtualized memory address comprises at least one predetermined unauthorized virtualized memory address.
19. The method of claim 18, wherein the virtual machine further comprises:
at least one of a translation cache to store translation data;
an execution engine; and
at least one interpret function invoked by the execution engine.
20. The method of claim 19, wherein the determining by the virtual machine if the received virtualized memory address comprises at least one predetermined unauthorized virtualized memory address comprises:
determining if the virtualized memory address is in a memory space available to the translation cache;
determining if the virtualized memory address is in a memory space available to the at least one interpret function; and
determining if the virtualized memory address is in a memory space region storing at least one of instructions and data for operations of the virtual machine.